

SGS HOLISTIC SOLUTION FOR MANAGING ZERO DISCHARGE FOR THE TEXTILE AND FOOTWEAR INDUSTRY

The textile industry is considered one of the most chemical intensive industries in the world. Approximately 9.3 million tonnes of chemicals are used annually for the global production of textile products. Many of these chemicals will end up in the products to achieve the desired colour, effects and functionalities. However, if they are used inappropriately or ineffectively, they would be discharged from the factories, posing global environmental concerns.



The inappropriate use of chemicals is the key issue. This problem boils down to the limited knowledge in upstream chemical management, limited knowledge about input chemicals, ineffective risk identification and lack of proper chemical inventories. A deficiency in traceability coupled with the technical gap in the supply chain prevents the industry from understanding the root cause of the problems and prevents the industry from moving towards environmentally responsible production.

The SGS Holistic Solution for managing Zero Discharge addresses the chemical and environmental issues in the supply chain. It provides technical support and feasible solutions to brands, retailers, and other players in the value chain through our three strategic areas of services:

TRIO APPROACH TO MANAGE INDUSTRY CHALLENGE



TRAINING

Training & Knowledge Management

Helps the supply chain to build up technical competence and know-how



ASSESSMENT

Chemical Risk Assessment

Provides sampling, testing and factory assessment for setting up current baseline to benchmark and enable future improvements and data disclosure



IMPLEMENTATION

Best Practice & System Implementation

Encourages the development of effective chemical management systems and implement best practices along the supply chain

OUR TRIO APPROACH

1. TRAINING & KNOWLEDGE MANAGEMENT

At SGS, we view training as a fundamental way to strengthen the understanding of zero discharge and a way to advance supply chain's knowledge of chemical management. Training will address the knowledge gaps that industry stakeholders may have. SGS supports the textile industry with the following schemes:

Participants will acquire an appropriate level of knowledge to implement sound chemical management system in their workplace and to enhance traceability and transparency of chemical use.



HIGG INDEX - FACILITY ENVIRONMENTAL MODULE (FEM) SELF-ASSESSMENT WORKSHOPS

The Higg Index FEM is developed by the Sustainable Apparel Coalition (SAC) in a form of web based self-assessment tool to evaluate the environmental performances of the facilities in order to drive continuous improvement.

The Higg Index FEM is structured in a way that covers seven (7) key environmental areas and comprises questions in three (3) different levels to explicit the degree of environmental achievement.

HAZARDOUS SUBSTANCE CONTROL (HSC) WORKSHOP

Hazardous Substance Control (HSC) is a modular and process specific workshop which is designed with Chemical Flow Management (CFM) methodology in mind.

The workshop is designed to be practical and highly interactive and is customized to each stage of the

production process (dyeing, printing, washing, and finishing) making it highly relevant to the participants.

Also, practical toolkits, which are demonstrated and provided to the participants, will allow them to immediately implement their newly acquired knowledge in risk assessment when they return to their workplace.



Level 1: Tracking and Conformity
Level 2: Baselining and Improving Performance
Level 3: Leading Practice

SGS offers various Higg Index FEM related workshops from Introductory to capacity building with aims to assist facilities to better understand their current environmental status and the requirements from the Higg Index FEM so as to make progressive improvement on the environmental performance over time.

SGS Higg Index Workshops enable participants:

- To understand the background of SAC and the operation of Higg.org
- To gain good understanding of the context and requirements of Higg Index FEM questions
- To be able to complete the self-assessment
- To formulate effective environmental strategies
- To comprehend the environmental interactions and impacts associated with the operation activities
- To identify opportunities for achieving continuous improvement

2. CHEMICAL RISK ASSESSMENT

CHEMICAL SCREENING (SGS BRS300-2020)

This **chemical screening** is an innovative and novel solution for commercially available **chemical formulations**, which is designed to be practical, applicable and achievable for the industry.

Our panel of multi-disciplinary technical experts in the field of textile and leather chemistry researched and assessed the relevancy of the target analytes to ensure the scope of our screening solution covers a **comprehensive list of substances** to ensure the chemicals used in products are low risk and compliant.

SGS BRS300-2020 ANALYTE LIST

- Full list of analytes in ZDHC MRSL V2.0.

MANUFACTURING RESTRICTED SUBSTANCE LIST (MRSL) TESTING

As an alternative to chemical screening, SGS offers **target quantitative analysis** for the full ZDHC MRSL on Group A (Raw Materials) and Group B (Chemical Formulations). This is done using analytical chemistry technology to achieve a lower and possible detection limit as required by the market.

It takes a conventional testing approach and provides an absolute figure to the client to help assure a greater level of product safety compliance.

HIGG INDEX VERIFICATION

SGS **verifies the Higg Index Self-Assessment** for apparel and footwear manufacturing facilities via on-site audits. It is a verification service for environmental assessment of the Higg Index of suppliers, based on the SAC Higg Index. The Higg Index is a business-driven programme created by and for global buying companies for sustainable improvement of workplaces and environmental conditions in the global apparel and footwear supply chain.

A robust review, offering a high level of trust to a facility's customers, is conducted by an SGS verifier who will visit the facility to review the assessment on site.

WASTEWATER TESTING & BENCHMARKING

SGS has worldwide capability to collect wastewater & sludge samples on-site and to conduct target quantitative testing with reference to the latest version of the ZDHC Wastewater Guidelines including:

- Textile, apparel and footwear suppliers with wet processing facilities
- Man-made fibres manufacturing process for Viscose Staple Fibres and Modal Staple Fibres

Test data can be used to set a baseline for wastewater and sludge discharge for continual improvement and using it for the purpose of data disclosure for the purpose of data disclosure.



3. BEST PRACTICE & SYSTEM IMPLEMENTATION

ROOT CAUSE ANALYSIS

Our Root Cause Analysis intends to address technical gaps in chemical management. It is designed to highlight high risk restricted substances that are used in the manufacturing of textile and footwear products. It combines an **on-site factory visit** and **on-site sampling of chemicals and products for testing**.

BENEFIT OF ROOT CAUSE ANALYSIS

We will assist our customers by:

- Validating chemical input at each production stage with reference to the documents provided by the factory
- Identifying root cause(s) that contribute to the technical gaps
- Proposing an action plan for improved usage of chemicals in the factory

CHEMICAL INVENTORY SOLUTION

DEVELOPMENT

The development of a **Chemical Inventory List (CIL)** helps factories in understanding their chemical input and supports them in increasing **system traceability** and **transparency** through tracking key data for chemical management.

SGS helps factories to develop this critical tool by reviewing chemical formulations with the aid of technical datasheets, MSDS and MRSL testing reports to verify if the chemical formulations meet market requirements.

VERIFICATION

It is an on-site visit to verify that all chemicals purchased and used are properly logged into the chemical inventory.

The verification will **identify gaps** and **shortfalls** within the chemical inventory and chemical procurement system implemented by the factory, Thus, facilitates the manufacturer to initiate **improvement actions**.



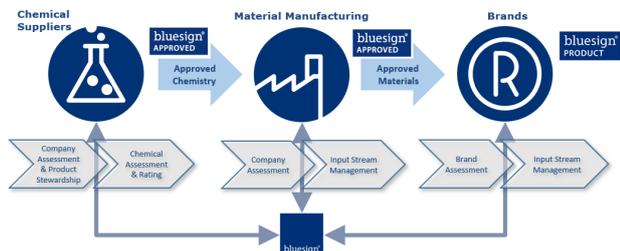
BLUESIGN

With the global seal of approval for environment, health and production safety, the bluesign® SYSTEM helps you and your suppliers to establish sustainable products without compromising consumer safety, functionality, quality and design.

The bluesign® SYSTEM offers an independent approval system for the textile industry, taking into account the whole production process, minimizing the impact on the environment and safeguarding human health. It also helps to decrease your production costs, increase your competitiveness and innovation, benefiting your business.

bluesign® ASSESSMENT tackles the chemical problem at its root. Instead of focusing on testing your finished product, it looks at all input streams – from raw materials, to chemical components, to water and energy resources. Every chemical is assessed, eliminating potentially harmful substances before you even begin production. This is followed by an on-site assessment verifying the chemical management system meets the stringent bluesign® CRITERIA.

BLUESIGN is a system of connected partners, facilitating improved traceability in the textile supply chain.



For more information:

<https://www.bluesign.com/en/business/services>

bluesign®

TOOLS OFFERED BY BLUESIGN FOR EXCELLENCE IN CHEMICAL

bluesign® FINDER



bluesign® FINDER is a web-based, advanced search engine that helps manufacturers find bluesign® APPROVED chemical products that meet the bluesign® CRITERIA with the highest level of chemical product verification. It also contains all important information needed to implement these products in the context of a sustainable supply chain. bluesign® FINDER is always up to date with bluesign® APPROVED chemical products and provides relevant information to minimize risks for people and the environment as well as improve consumer safety.

bluesign® XPERT



It is a web-based calculator that reports process data and impacts as well as resource and cost savings. Calculations are based on an established algorithm and EHS data based on the bluesign® TOOL using a company's own data. It also bench-marks with best practice processes from the bluesign® system partner chemical suppliers. It benefits the suppliers by having resource and cost saving information prior to production.

CHEMICAL INVENTORY TOOL



Manage your chemical inventory list on bluesign's cloud-based online platform, bluesign®CUBE, science gateway to responsible consumer textile products. bluesign®CUBE enables you to record, track chemical changes, and communicate/report your good chemistry performance for continuous improvement.

CONTACT US

For more information, visit www.sgs.com/zero or email global.sl@sgs.com.



Jeans. *Tested.*

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**Trusted
means
*Tested.***